In the Claims:

1. (currently amended) A control structure for the active damping of low-frequency oscillations in numerically-controlled machine tools, comprising:

~~an rpm~~ a speed regulator for generating a nominal current based on a difference between a nominal speed and an actual speed, said speed regulator comprising:

a proportional component; and

an integral component;

an active damping element that forms a low-frequency correction signal, which is phase-shifted with respect to an interfering low-frequency oscillation and free of d.c. components; and

a summing point that is upstream or downstream of said integral component and receives said low-frequency correction signal.

2. (currently amended) A control structure for the active damping of low-frequency oscillations in numerically-controlled machine tools, comprising:

a speed regulator comprising:

a proportional component; and

an integral component;

an active damping element that forms a low-frequency correction signal, which is phase-shifted with respect to an interfering low-frequency oscillation and free of d.c. components;

a summing point that is upstream or downstream of said integral component and

receives said low-frequency correction signal; and

~~The control structure in accordance with claim 1, further comprising~~ a second summing point that determines a second deviation of an actual speed ~~rpm~~ from a nominal speed ~~rpm~~ and said second deviation is directed to said proportional component; and

wherein a first deviation of said ~~an~~ actual speed ~~rpm~~ from said ~~a~~ nominal speed ~~rpm~~ is determined at said summing point and is directed to said integral component, and said low-frequency correction signal is applied at said summing point upstream of said integral component.

3. (currently amended) The control structure in accordance with claim 1, further comprising:

a second integral component that corresponds to said integral component of said speed ~~rpm~~ regulator, wherein said low frequency correction signal is applied to an input of said second integral component and said second integral component generates a signal at its output that is applied to a summing station located downstream of said integral component.

4. (currently amended) The control structure in accordance with claim 2, further comprising:

a position regulator that generates a nominal speed ~~rpm~~ signal;

a third summing point within said damping element that receives said nominal speed ~~rpm~~ signal and a ~~an rpm~~ derived speed signal that is derived from a nominal position value, said third summing point generates said correction signal based on a difference of

said nominal speed ~~rpm~~ signal and said speed ~~rpm~~ derived signal.

5. (currently amended) A control structure for the active damping of low-frequency oscillations in numerically-controlled machine tools, comprising:

a speed regulator comprising:

a proportional component; and

an integral component;

an active damping element that forms a low-frequency correction signal, which is phase-shifted with respect to an interfering low-frequency oscillation and free of d.c. components;

a summing point that is upstream or downstream of said integral component and receives said low-frequency correction signal;

a second integral component that corresponds to said integral component of said speed regulator, wherein said low frequency correction signal is applied to an input of said second integral component and said second integral component generates a signal at its output that is applied to a summing station located downstream of said integral component;

~~The control structure in accordance with claim 3, further comprising:~~

a position regulator that generates a nominal speed ~~rpm~~ signal; and

a second summing point within said damping element that receives said nominal speed ~~rpm~~ signal and a derived speed ~~rpm~~ signal that is derived from a nominal position value, said second ~~third~~ summing point generates said correction signal based on a difference of said nominal speed ~~rpm~~ signal and said derived speed ~~rpm~~ signal.

6. (currently amended) The control structure in accordance with claim 4, further comprising a first order delay time ~~DT1~~ member within said damping element that receives said difference between said nominal speed ~~rpm~~ signal and said derived speed ~~rpm~~ signal.

7. (currently amended) The control structure in accordance with claim 5, further comprising a first order delay time ~~DT1~~ member within said damping element that receives said difference between said nominal speed ~~rpm~~ signal and said derived speed ~~rpm~~ signal.

8. (currently amended) The control structure in accordance with claim 6, wherein a signal from an output of said first order delay time ~~DT1~~ member is supplied to a second order delay time ~~PT2~~ member.

9. (currently amended) The control structure in accordance with claim 7, wherein a signal from an output of said first order delay time ~~DT1~~ member is supplied to a second order delay time ~~PT2~~ member.

10. (currently amended) The control structure in accordance with claim 6, wherein an output of said first order delay time ~~DT1~~ member is supplied via a delay ~~PT1~~ member to a branch of said nominal speed ~~rpm~~ conducted on said integral component of said speed ~~rpm~~ regulator.

11. (currently amended) The control structure in accordance with claim 7, wherein an output of said first order delay time ~~DT1~~ member is supplied via a delay ~~PT1~~ member to a branch of said nominal speed ~~rpm~~ conducted on said integral component of said speed ~~rpm~~ regulator.

12. (currently amended) The control structure in accordance with claim 8, wherein said output of said first order delay time ~~DT1~~ member is supplied via a delay ~~PT1~~ member to a branch of said nominal speed ~~rpm~~ conducted on said integral component of said speed ~~rpm~~ regulator.

13. (currently amended) The control structure in accordance with claim 9, wherein said output of said first order delay time ~~DT1~~ member is supplied via a delay ~~PT1~~ member to a branch of said nominal speed ~~rpm~~ conducted on said integral component of said speed ~~rpm~~ regulator.

14. (currently amended) The control structure in accordance with claim 8, wherein a damping time constant of said second order delay time ~~PT2~~ member corresponds to a resonance frequency to be damped.

15. (currently amended) The control structure in accordance with claim 9, wherein a damping time constant of said second order delay time ~~PT2~~ member corresponds to a resonance frequency to be damped.

16. (currently amended) The control structure in accordance with claim 4, wherein said difference between said nominal speed ~~rpm~~ and said derived speed ~~rpm~~ is multiplied by an amplification factor.

17. (currently amended) The control structure in accordance with claim 2, wherein said nominal speed ~~rpm~~ is conducted over a reference model of a control track prior to said determining said second deviation with said actual speed ~~rpm~~ at said second summing point.

18. (currently amended) The control structure in accordance with claim 17, wherein said reference model of said control track is embodied as a second order delay time ~~PT2~~ element, which simulates said control track and acts in a counter-phase manner.